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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,054	11/19/2003	Yukinori Midorikawa	980764CIPDD/LH	7438
1933	7590	09/22/2004	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 767 THIRD AVENUE 25TH FLOOR NEW YORK, NY 10017-2023			CULBRETH, ERIC D	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,054

Applicant(s)

MIDORIKAWA ET AL

Examiner

Eric D Culbreth

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 18 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/207,908.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/19/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The declaration is not dated (i.e., the inventors did not date their signatures).

Priority

2. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Japan on 12/16/97. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter. Parent application 09/207,908 was filed 12/09/98, which is more than a year before the filing date of Japanese Application 09-363275 (12/16/97).

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: See the list below. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the

Art Unit: 3616

page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

- a. 2100 (page 47, line 13);
- b. 21 (page 53, line 23); although the reference numeral is shown in later embodiments, it is not in Figures 1-13, etc., where it is being mentioned on page 53. Note also page 66, line 17, page 85, lines 13 and 28, page 87, line 12, etc.;
- c. S1200 (page 72, line 11);
- d. 308 and 309 (page 73, line 24 and throughout the remainder of the specification);
- e. 3 and 3a (page 73, line 30; they are not in Figure 14 which is being discussed at this point in the specification);
- f. S1511 (page 75, line 10; it is not in Figure 15, which is being discussed at this point in the specification);
- g. S609 (page 75, line 17) is not in Figure 15;
- h. S1612 (page 76, line 1);
- i. S1720 (page 76, line 31);
- j. 600 (page 94, line 27 and the remainder of the specification; reference numeral 100 is in Figure 31);
- k. 800 (page 104, line 30; page 121, line 3) ;
- l. 900 (page 110, line 16 and page 118, line 2) ;
- m. S4709 (page 112, line 4);

Art Unit: 3616

- n. 1000 (page 114, line 10);
- o. 1100 (page 118, line 1);
- p. 1200 (page 121, line 2);
- q. 1300 (page 122, line 7);
- r. 55 (page 137, 17; it is not on Figure 58, but that Figure is being described at page 137);
- s. S6502 (page 138, lines 15 and 21);
- t. 3s (page 140, line 4; this should apparently be 3a);
- u. 1800 (page 150, line 3 and page 154, line 26);
- v. 210 (page 151, line 3; page 152, line 10; page 155, line 27; page 158, line 21) ;
- w. 1900 (page 154, line 24);
- x. 2000 (page 164, line 7; page 165, line 1 ; page 171, line 14) ;
- y. 65 (page 164, lines 15 and 18; also note that 65 refers to both a signal output device at line 15 and a converter at line 18 – a reference numeral should only refer to one part of the invention);
- z. 2100 (page 171, lines 12 and 20; page 172, line 7);
- aa. 2700 (page 187, line 15);
- ab. im (page 193, line 21);
- ac. 3000 (page 195, line 17 and the remainder of the specification).

4. The drawings are objected to because of the following informalities. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

Art Unit: 3616

abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

- a. Figures 38A – 38F are connected, which is improper (figures should not be interconnected);
- b. In Figure 5, block S506, “ATTACHING” is misspelled;
- c. In Figure 8, circled F is followed if YES at the bottom of the figure, but then is followed if NO at the top right side;
- d. Contrary to page 71, line 21 there is no reference numeral 4098 in Figure 4;
- e. Figure 14 is not clear because parts 308 and 309 (page 74) are not illustrated and/or are not labeled;
- f. On page 74, line 25 “18” should apparently be “318” (Figure 14 has no reference numeral 18);

Art Unit: 3616

- g. Generally, the specification and drawings are unclear because of missing numerals and discrepancies in numerals. The entire specification and drawings should be carefully reviewed and rewritten;
- h. On page 83, line 33 “35” should be “36” (lines 32-33 of page 83 refer to both a tongue and belt with reference numeral 35);
- i. Contrary to page 88, lines 26-27 at block S3009, N is not incremented by 1 (it is at block S3021);
- j. In Figure 28, block S3303, “INTERRUPT” is misspelled;
- k. Page 93, lines 18-19 state that block S3507 goes to step 3404, but in Figure 30 S3507 goes to block S3304;
- l. Contrary to page 95, lines 65-66 reference numeral 100 is not in Figure 31 (rather reference numeral 600);
- m. In Figure 31, block 42 “CLOSING” is misspelled;
- n. On page 97, line 5 “S306” should be “S3706”;
- o. Comparing Figure 37 and page 101, lines 24-29, the Possibility of Doze is small and large in the figure, but low and high in the specification;
- p. On page 126, line 11 “1” should be “14”;
- q. On page 127, line 4 “54” should be “51”;
- r. On page 146, line 19 “B2” should be “b2”;
- s. Page 155, line 25 to page 156, line 11 are reversed to Figure 66’s step S7201 (high to low in Figure, low to high in specification);
- t. Page 159, lines 19-21 state 30-40%, but block S7405 in Figure 68 states 60-70%;

Art Unit: 3616

- u. On page 160, line 12, "S7210" should be "S7410";
- v. On page 186, line 8, "17" should be "19";
- w. On page 197, line 10 "162" should be "112" (see Figure 81).

Specification

5. The abstract of the disclosure is objected to because of the following informalities.

Correction is required. See MPEP § 608.01(b).

- a. In line 1 of the substitute abstract, "apparatus" is misspelled;
- b. Lines 1-2 of the abstract are not accurate to the invention as disclosed (the passenger restraint system is not disclosed as preventing damage to a seatbelt);
- c. The abstract itself is not descriptive of the invention as now claimed in the claims as amended (using seatbelt speed to control the power of airbag deployment).

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

7. The disclosure is objected to because of the following informalities.

Appropriate correction is required.

- a. On page 1, line 27 "30" should be deleted;
- b. On page 2, line 23 "takes long" should be "takes a long time";
- c. Page 15, lines 4-18 are an incomplete sentence;

Art Unit: 3616

- d. On page 18, line 5 “give” should be “gives”;
- e. On page 18, line 29 the dash (“-”) adjacent the comma should be deleted (note also page 25, line 29, and page 31, line 29);
- f. On page 35, line 18 and much of the remaining specification “PWM” is not clear (this phrase is not identified as pulse width modulation until much later in the specification);
- g. On page 42, line 20, it is not clear if Figure 15 is directed to the first embodiment;
- h. Also regarding page 42, line 20 there is no S1702 in Figure 7;
- i. Regarding page 42, lines 23-24 there is no S1703 in Figure 7;
- j. There are similar occurrences to subparagraphs h and i above in the descriptions of Figure 17 on page 42 and Figures 19-20;
- k. On page 42 the description of Figure 18 is not clear (Figure 21 has not been described yet);
- l. From pages 42-43, it is not clear if Figures 21-23 are part of Figure 1 (motor 10 mentioned on these pages in Figure 1);
- m. On page 43, line 15, there is mention of the 5th embodiment, but a 3rd and 4th have not been mentioned;
- n. Page 46, line 9 mentions a 15th embodiment, but the 9th-14th embodiments have not been mentioned;
- o. Regarding page 46, lines 29-32 it is not clear how Figures 65 and 66 are continued parts of Figure 64;
- p. Page 47, line 20 mentions the 24th embodiment, but the 19th-23rd have not been described;

Art Unit: 3616

- q. On page 48, line 2, a 27th embodiment is mentioned but there has been no mention of a 25th to 26th embodiment;
- r. On page 50, line 34 “FETs” is not understood;
- s. Page 60, lines 23-29 are an incomplete sentence;
- t. Page 63, lines 17-23 are an incomplete sentence;
- u. On page 63, line 32 the parenthesis after “810” should be deleted ;
- v. Page 75, lines 5-8 suddenly refer back to the first embodiment (Figure 4); it is not clear if Figure 15 is the first or second embodiment;
- w. On page 82, lines 2-3 no units are given for “200”;
- x. On page 92, line 30 a period should follow “processing”;
- y. Page 102, lines 7-10 are confusing because if the degree of danger is low, motor 10 it would appear should not be driven at all (note also page 102, lines 16-25, page 102, line 32 – page 103, line 10, page 103, lines 17-30, and page 104, lines 1-7;
- z. Page 102, lines 16-25 are an incomplete sentence;
- aa. Page 102, line 32 to page 103, line 10 are an incomplete sentence;
- ab. Page 103, lines 17-30 are an incomplete sentence;
- ac. On page 110, line 12 and page 117, line 31, “th” should be “the”;
- ad. On page 112, line 11 a period should be inserted after 3;
- ae. Page 113, lines 19-24 contain an incomplete sentence;
- af. On page 120, line 35 one of the periods should be deleted;
- ag. On page 124, line 8 “the” after the period should be “The”;

Art Unit: 3616

ah. Regarding page 126, lines 7-8 it is not clear why a DC-DC converter is needed or what it is (a converter to convert direct current to direct current?);

ai. On page 127, line 28 it is not clear what a WSI is;

aj. On page 127, line 31 it is not clear what a VSI is;

ak. On page 140, line 6 “pretension” should be “pretensioner”;

al. On page 140, line 11 “has” should be “having”;

am. On page 142, lines 10-11 it is not clear from the disclosure how coefficients K1 and K2 are determined (how would the skilled artisan make and use the invention from the mere disclosure that these are coefficients with no disclosure of how they are determined?);

an. Similarly, regarding page 142, lines 15-16 it is not clear how a1 and a2 are determined;

ao. On page 146, lines 18-19 it is not clear how b1 and b2 are determined;

ap. On page 147, lines 14-15 and the remainder of the specification, it is not clear what “EA function” is;

aq. On page 151, line 26, the period should be a comma;

ar. On page 156, lines 24-27 it is not clear what “60-70%” refer to (i.e., what is the “duty factor” from the disclosure);

as. Regarding claim 158, lines 5-6, it is not clear how the duty factor is increased (i.e., how is this done in the invention);

at. Similarly, regarding page 160, lines 11-12 and throughout the remainder of the specification, it is not clear from the specification how the duty factor is decreased;

au. Regarding page 160, lines 25-26, 35% is not within the range of 60-70%;

Art Unit: 3616

- av. Regarding page 161, line 21 “describe” should be “described”;
- aw. On page 162, line 1 and page 177, line 33 “,” should be “,”;
- ax. Regarding page 180, line 31 and page 183, line 14, “r” needs to be disclosed

better (how would the skilled artisan determine the temperature coefficient r from the disclosure?);

- ay. On page 197, line 29 the comma should be deleted;
- az. On page 198, line 9 the period after “114” should be a comma;
- ba. On page 199, line 34 and page 200, line 20 the units of “70” should be given;
- bb. On page 200, line 19, the units of “30” should be given.

8. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the number changes to correct the informalities above may result in confusion at the time of printing the patent should the application issue.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification

Art Unit: 3616

contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Allowable Subject Matter

9. Claims 17-18 are allowed.

Conclusion

10. This application is in condition for allowance except for the following formal matters:

The issues listed above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte*

Quayle, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents US006485057B1 and US006729650B2 to Midorikawa et al are cited as the issued patents of the parent applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric D Culbreth whose telephone number is 703/308-0360. The examiner can normally be reached on Monday-Thursday, 9:30-7:00 alternate Fridays off.

Art Unit: 3616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric D Culbreth
Primary Examiner
Art Unit 3616



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